In its first ten years, the nonprofit Pratham Books produced around 450 children's titles. In the next two years, it created 7,000. The key to this explosion of creativity was the charity's new online platform, StoryWeaver. Here, dozens of colorful thumbnail images each point to a delightfully illustrated children's story. A filter allows visitors to quickly find all the works in a particular language, such as English (2,984 titles), Hindi (1,101), French (682), or Bengali (248). Each story may be read online, shared on Facebook or Twitter, saved for offline reading, and downloaded for printing. The key innovation of StoryWeaver, however, is that visitors can also adapt existing stories to create new ones. Thanks to a user-friendly interface,

anyone who can browse the web and edit slides can create a beautifully illustrated children's story, with no artistic talent required. Native English speakers can easily "relevel" an advanced story for younger readers by simplifying the text. Bilingual visitors can translate stories into a new language. The truly ambitious can create an entirely new story, drawing on a bank of more than ten thousand child-friendly illustrations.

This adaptability is the secret to the recent explosion in productivity. Originally, Pratham Books relied on the efforts of hired authors, illustrators, and translators. StoryWeaver is premised on the observation that large numbers of people each dedicating a little free time can often do a job more efficiently than full-time staff. Wikipedia became the world's largest encyclopedia and YouTube became the second-most visited website in the world by enabling what Yochai Benkler's The Wealth of Networks identifies as "peer production." Peer production began among software engineers, but has grown into a significant model of creative production in the era of social media. These collaborative platforms provide an outlet for individual creativity, technological tools to make the production process simple, and the psychic motivation of being able to reach a vast audience.

Creative Commons

StoryWeaver's openness to follow-on creativity is made possible by Creative Commons licenses. Copyright law establishes that every recorded work of art, music, or writing is automatically protected for the lifetime of the creator plus an additional fifty years. During this time, no one may copy, translate, or build upon that work without the explicit permission of the copyright holder, unless a statutory exception applies. Creators who actually want to see their work shared, translated, or built upon, however, can give back some of these exclusive rights by attaching a Creative Commons license. This lets others know that they have the author's advance permission to do certain types of things with the work. Ownership of the copyright stays in the name of the author; the Creative Commons license operates like a rider or addendum.

Creative Commons licenses are an outgrowth of the open-source software movement. Historically, most software was free for copying, sharing, and building upon. This changed in the 1970s and 1980s as software became included under copyright law. Some computer programmers disliked the shift. The new proprietary approach made it harder for them to get their hands on code that they could use, explore, and adapt to new purposes. Richard Stallman and Linus Torvalds were leaders in the

effort to recover the original approach. Gradually, opensource software advocates agreed on standard licensing terms to ensure the openness and interoperability of the code they produced. Today, open-source and proprietary software both play important roles in the computer industry.

In the late 1990s and early 2000s, others began to adapt the idea of open licensing beyond software. The Open Content License was created in 1998 to enable sharing of text, music, and art. Wikipedia launched in 2001, built around a GNU Free Documentation License, to ensure that its articles could be freely edited. In 2005, the Hewlett Foundation gave Larry Lessig and collaborators at Stanford Law School a grant of \$1 million to develop an even more robust set of open content licenses. These Creative Commons licenses are now the leading standard in open licensing.

What began as a small movement of people who believed in sharing has grown into a significant force. Open licensing has become standard in many academic disciplines, from physics to medicine. Services such as Flickr and Google now allow users to search specifically for openly licensed photographs and video. By 2016, authors, musicians, and other creative types had used Creative Commons licenses to share more than 1.2 billion creations.

Open licensing is particularly ideal for creators more interested in exposure than earnings.

Open Translation

About ten years ago, SooHyun Pae was preparing for a career as a translator between Korean (her native language) and English. Then she discovered the Creative Commons movement. "It helped me a lot, understanding translation as a creative work itself." Under copyright law, a translation into another language is considered a "derivative work," which can only be done with the explicit permission of the original author. "Translation is a derivative work of another creative work," Pae acknowledges, "but I felt, and I still feel, that translation is itself the creative work of a translator."

As a full-time creator of new works out of old ones, Pae easily recognized the power of Creative Commons licenses. "If you allow more derivative works to be created, it helps to enrich the culture in many different languages." Creative Commons licenses acknowledge the work of the original author; they also "appreciate peoples' efforts and interest in making use of creative works to create another creative work," in Pae's words. Pae also saw open translation as offering an important opportunity to promote cross-cultural understanding. "When

you translate something, it's not just using different language to deliver the same message to a different audience. It's about connecting two different cultures and interacting with people from other cultures, trying to understand other cultures."

Today, Pae is a leader in South Korea's Creative Commons community. Her current projects include advising a nonprofit that translates foreign children's books to increase Korean children's exposure to other cultures, as well as translating texts about open licensing and free culture into Korean. Pae articulates the broader philosophical foundations behind the free culture movement. "When I first joined this movement, I was into this concept of giving access to information and creativity to everyone." This can indeed be an important function of Creative Commons licensing. "But nowadays," Pae continues, "I feel it's more about giving everyone the opportunity to engage and participate." Not just as a reader or consumer, Pae emphasizes, but truly enabling everyone to take on a creative role. That more active vision of creativity is also a more inclusive one. "We can use Creative Commons licenses to create more materials in diverse languages," Pae says; "I think this could be a huge help."

Organizations focused on overcoming language barriers to reading have enthusiastically embraced open licensing.

Both Pratham Books and the African Storybook Project publish everything they create on Creative Commons licenses. This decision enables educators across the globe to translate any of their materials into any other language. Suzanne Singh of Pratham Books offers an example: "There is a group in the extreme north of India that speak a language called Ladakhi, a hill language." Volunteers in the community converted a number of Pratham Books titles into Ladakhi to use in their schools. This unanticipated use helped to advance the mission of Pratham Books, but would have been impossible for the organization to accomplish directly. "There are 20,000 people speaking the Ladakhi language," Singh points out. "That is not a viable market even for Pratham Books." While producing books in Ladakhi was not high on the agenda for Pratham Books, it was important to people in that community. All they needed was permission.

Additional Advantages

Open-access publishing also helps social publishers address the challenge of affordability. The term "free culture" plays on a double meaning: free as in freedom (*libre*), and free as in "free of charge" (*gratis*). Books with Creative Commons licenses are free in both senses. Parents, teachers, and students may download them to any device

without paying a fee. The license also permits local printing or photocopying, enabling an at-cost print version.

Recognizing the potential cost savings, the Hewlett Foundation has funded Creative Commons to work on a project to improve the affordability of higher education. In a recent survey, only one-third of U.S. faculty members reported that at least 90 percent of their students purchased the required textbook. Textbook cost can be a significant barrier to learning. In the United States, estimates of college textbook costs range from \$655 to \$1,300 per year. This might be one-fourth of the total cost of studying at a community college. Creative Commons now promotes the goal of a Zero Textbook Cost Degree. Both California and New York have budgeted funds to support the development of openly licensed textbooks. Faculty authors are compensated for their work through an up-front grant. Students nationally are already saving millions of dollars per year by using open textbooks.

Creative Commons licenses also facilitate adaptation into other formats. Openly licensed textbooks enable faculty members to adjust or recombine existing materials for different courses. Openly licensed stories can be recorded in audio or audiovisual formats, reformatted for blind or dyslexic students, or releveled to make advanced texts simpler for early learners. Without an open license,

educators wanting to do any of these things for their students face daunting questions. Is it fair use or not? Is it worth writing and waiting for permission? What if payment is requested that makes it no longer worthwhile? In some cases, copyright savvy or pure persistence wins out, but many other opportunities are lost.

Choosing Among License Options

I tell my students to think of open licenses like ice cream: they come in a variety of flavors. Then I share a personal story to illustrate the point. I first began using Creative Commons licenses in 2006. I had gone for a walk across the University of Chicago campus on a beautiful September day. I happened to walk past Frank Lloyd Wright's Robie House. Having recently bought a digital camera for graduation, and I snapped several pictures of the historic building. Later, I uploaded the photos to Flickr, selecting the option to attach a Creative Commons license. Months later, I received a thank-you email; one of my photos had been used in a university publication by my alma mater. My photography skills are very amateur, but my work met their need, saving someone a long walk on a cold day.

Creative Commons licenses come with options. The creator can choose to require attribution or not, to forbid

changes or not, and to bar or permit commercial use. For my early Flickr experiment, I chose the Attribution Share-Alike license, abbreviated as CC-BY-SA. The terms of this license required the University of Chicago to credit me as the photographer, and to share its own resulting publication on a similar license. I had decided against the "no derivatives" restriction, because I had no objection to my photos being cropped or converted to black-and-white. I also avoided the "no commercial use" restriction, because I would have been fine with seeing the photo appear in a commercial tourism brochure or coffee table book.

Today, Creative Commons encourages its users to choose its simplest licenses, because every restriction limits the work's potential usefulness. For example, a "no derivatives" restriction would prohibit translations or excerpts. Google Books will not carry the full text of books published with a "no commercial use" restriction. A "share alike" provision could deter a commercial publisher from making copies available in print. Creative Commons has two licenses, however, that are compatible with all of these uses. Under the elegantly simple CC-BY license, attribution to the original creator is the only requirement. When even credit is unimportant, the creator can go further, selecting a CCo license to dedicate the work to

the public domain. Those options may not be best in every circumstance. This book, for instance, carries a Creative Commons-Attribution-Noncommercial-ShareAlike (CC-BY-NC-SA) license. This authorizes personal copying and charitable translation, while protecting Yale University Press from competition.

Getting Started

Creative Commons licensing has a vital role to play in tackling book hunger. Open-access books facilitate costless sharing and adaptation to diverse needs, especially through translation. Although open licensing is not right for everyone, I believe that all authors, illustrators, and publishers with a sense of social mission should explore what open licensing could do for their cause.

Open licensing mandates are also becoming increasingly common requirements for funding from governments and foundations. Mandates certainly have power to quickly transform a field, but I would prefer to see this happen through encouragement rather than by force. Funders can incentivize authors and publishers to learn about and experiment with open licensing. Book charities themselves are smart to get ahead of the curve. This is possible even when the charity or author does not have complete control over the copyright. When I have asked

my publishers' to agree to Creative Commons licenses on my articles and books, better than nine out of ten have agreed.

Charities experienced with Creative Commons licensing recommend starting out small. Intellectual property lawyer Gautam John first suggested that Pratham Books experiment with Creative Commons licenses in 2008. Pratham Books implemented the suggestion by putting just a few titles on open licenses. "The response to this was phenomenal," Suzanne Singh recounts. "People picked up our books and translated them into new languages. The content got repurposed; teachers were using it in different ways." There was also an impact on print sales. "We were concerned it would cannibalize the sales," John notes, "but the books we had made available online outsold the books we had not three-to-one." "It's not really counterintuitive," John argues, noting that many other content creators have witnessed similar results. "This is free advertising of a kind."

Open licensing requires a counterintuitive leap of faith: that surrendering control will actually help achieve your goals. The best way to overcome doubt is to conduct your own experiment. If you are a publisher, identify half a dozen backlist titles whose sales have slowed, and release half of them on a Creative Commons license. If you

are an author, identify two books with similar sales figures and ask your publisher to put just one on an open license. You may find, as Pratham Books did, that print sales increase for the open book, because digital circulation is serving as free marketing. Although it is more difficult to track, there should also be a positive impact on sales of non-open titles by the same author. If you are a creator, you are likely to receive more invitations to illustrate, or speak publicly, as more people discover your work. Open up your creativity to others, and see what happens.